

**Amendments to the Drawings:**

Please substitute the attached sheets of formal drawings located in Appendix A for the formal drawings currently on file.

The attached drawing sheets containing Figures 2 and 15 are being presented as new formal drawing sheets to be substituted for the previously submitted drawing sheets. Figure 2 and Figure 15 have been amended.

The specific changes which have been made to the figures are:

In Fig. 2, reference number "2L" has been changed to "19."

In Fig. 15, the reference number "10a" has been changed to "9 / 10a."

**REMARKS**

The Office Action mailed on March 25, 2004 and the Advisory Action mailed on October 18, 2004, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-37 were pending in the present application, with claims 6-10, 13 and 15-17 being withdrawn from prosecution. By this paper, Applicants cancel claims 6-10, and add new claims 38-43. Therefore, claims 1-5 and 11-43 are pending in the present application.

Applicants respectfully submit that the present application is in condition for allowance for the reasons that follow.

**Interview of October 28, 2004**

Applicants thank Examiner Fineman for extending the courtesy of a telephone interview on October 28, 2004, where Examiner Fineman indicated that claim language which described the beam paths with respect to elements of a microscope would be helpful. To this end, Applicants have added new claims 38-43, as seen above.

**Illustrative Drawing Attached**

In order to advance prosecution, Applicants hereby provide, in Appendix B, an illustrative drawing indicating the location of various claim elements with respect to a stereomicroscope according to an envisioned commercial embodiment of the invention. Applicants do not intend for this drawing to be entered as a figure, but simply to be used as an aid in evaluating the patentability of the claims.

**Objection to the Drawings**

The drawings are objected to. In response, Applicants have amended the drawings as shown above, and respectfully request reconsideration.

**Objection to the Specification**

The specification is objected to. Applicants have amended the specification as shown above, and respectfully request reconsideration.

**Rejections Under 35 U.S.C. § 112**

Claims 1-5, 11-12, 14 and 18-37 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants request reconsideration in view of the amendments to claims 1, 11, 18, 23 and 26 as shown above.

**Applicants note that these amendments are consistent with the amendments filed, but not entered, on September 27, 2004, which generated an Advisory Action in which Examiner Fineman indicated that the “it appears that the entry of the amendment overcomes the 112 rejection.”**

In regard to claims 4-5, 21-22 and 31-32, Applicants have amended Fig. 15 to replace the reference number “10a” with “9 / 10a,” and respectfully point to paragraph 0099 of the published application, which states that, in reference to Fig. 15, this “construction - and also that of Fig. 18 - could be equipped with an image recording device instead of the display 10a.” Reconsideration is respectfully requested.

**Claim Rejections Under 35 U.S.C. §103(a)**

In the Office Action, claims 1-2, 11, 18-19, 23, 26-29 and 33-35 stands rejected under 35 U.S.C. §103(a) as being unpatentable over JP-807 (Japanese Patent Application No. JP 03223807A) in view of US-909 (U.S. Patent No 4,827,909), while claims 3-5, 12, 20-22, 24 30-32 and 36 stand rejected under 35 U.S.C. §103(a) as being unpatentable in view of the e just mentioned references when further combined with Beste (U.S. Patent No. 3,251,933). Claims 14, 25 and 37 are rejected in view of the combination of JP-807 with US-909, Beste, and Minns (U.S. Patent No. 3,353,892). Applicants respectfully traverse the rejection as to the claims above, and submit that these claims are allowable for at least the following reasons.

Applicants rely on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and second criteria of MPEP § 2143 have not been met in the Office Action.

**Lack of Suggestion or Motivation to Modify or Combine the References**

MPEP § 2143.01 states that obviousness “can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some *teaching, suggestion, or motivation* to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” (MPEP § 2143.01, subsection 1, emphasis added.) Applicants respectfully submit that the motivation proffered to combine JP-807 with US-909 is insufficient to sustain a *prima facie* case of obviousness.

Before going forward, it is important to briefly explain the device of US-909. The device of US-909 is an endoscope. That is, it is a snake-like device that is inserted into a cavity to view an object on the inside of the cavity. Fig. 2 shows the end of the device, where *illuminating* lenses 5a and 5b are located on either side of *objective* 7. Fig. 5 in view of Fig. 1 shows that light from a light source is directed in an alternating manner to illuminating lenses 5a and 5b. This alternating light *illuminates* the observed object in a stereo-type manner, thus permitting the camera of US-909, after manipulation with a computer having a complex control algorithm (see Fig. 3 of US-909), to obtain a stereo image. That is, US-909 relies on alternating illumination of a viewed object coupled with an electronic control package to create the stereoscopic effect.

\* \* \* \* \*

For modification to combine the references, the Office Action states that it would have been obvious “to provide the rotatable shutter of US-909 in front of the display of JP-807 to provide controlled, stereoscopic illumination of the image,” citing “column 5, lines 46-53, US-909.” (Office Action, page 5, lines 5-8, emphasis added.) Applicants agree that the cited passage of US-909 does indeed states that the turret 39 (assumed *arguendo* to be a shutter) of US-909 “alternately stereo-*illuminat[es]* the light *from* the first and second *illuminating* lenses 5a and 5b *to the inspected object*.” (Emphasis added.) That is, US-909 teaches that the turret 39 is used to provide alternating stereo-illumination of an observed object. In this manner, illumination light, as opposed to light from a display unit or light from the object viewed, is split so that the camera of US-909 may film stereoscopically.

However, Applicants respectfully submit that the ordinary artisan would not have modified JP-807 as proffered in the office action. First, modifying JP-807 by placing a shutter in front of the display of JP-807 would not result in “stereoscopic illumination of the image,” since there is no light source taught in JP-807 to “illuminate” an image. Second, alternating stereo illumination of a viewed object to obtain a stereo image, as taught by the cited passage of US-909, is not needed in JP-807, since JP-807 already provides a stereoscopic microscope. Indeed, such alternating stereo illumination of the object to be viewed may actually interfere with the device of JP-807, since it already functions as a stereo microscope without modification. Third, the device of US-909 requires a complicated

electronics package for implementation of its stereoscopic system. In contrast, JP-807 does not rely on such electronics. Thus, US-909 would discourage an artisan of ordinary skill from using such a system in JP-807, and therefore teaches away from the present invention. In sum, the artisan of ordinary skill would have no reason to seek out US-909 to modify JP-807, and, in fact, probably would have been discouraged from even considering the teachings of US-909 to arrive at the invention of the independent claims.

\* \* \* \* \*

MPEP § 2143.01, subsection 6 states that “the proposed modification cannot change the principle of operation of a reference – If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959).” In *Ratti*, the CCPA held that the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the primary reference.” This substantial redesign would have resulted in changing a rigid seal to a resilient seal. Thus, a reference cannot be modified to render an invention obvious if the modification changes the principle of operation of the reference.

A principle of operation of JP-807 is to divide normal light from a viewed object and direct that light to separate eye-pieces. (See Fig. 1). No components of JP-807 provide alternating stereo illumination of the object. Such is consistent with the principle of operation of typical stereomicroscopes. Inserting the device of US-909 to obtain stereo illumination of the viewed object would change the principle of operation of JP-807, a result that under law renders the teachings of the references insufficient to sustain a *prima facie* case of obviousness. (See MPEP § 2143.01, subsection 6.)

Another principle of operation of JP-807 is that the device depends on the wavelengths of light from the display to control the image from the display presented to the observer. In JP-807, image combiner 1, which has

the dependency of the reflection angle on wavelengths[,] is constituted to reflect light of different wavelength bands to different directions, the videos of the plural different colors displayed in the same small region on a video display means 2 can

be observed by shifting the same in different regions, i.e., by superposing these images as the largely magnified intermediate real image 9 on the magnified intermediate real image.

(JP-807 Abstract, Constitution.) That is, through image combiner 1, the device of JP-807 relies on wavelength bands of the display to control the overlaid image from the display. (Fig. 3 of JP-807 appears to present a schematic representation of this effect.) Modifying JP-807 to provide “*controlled* stereoscopic illumination of the image” utilizing the alleged shutter device of US-909, as proffered in the Office Action, would thus change the principle of operation vis-à-vis control in addition to the principle detailed above. Thus, the references do not sustain a *prima facie* case of obviousness for yet another reason.

\* \* \* \* \*

The purpose of JP-807 is to “reduce the cost and weight” of a device by “inserting an image combiner element into the parallel transmission optical paths between objective lenses and an imaging lenses.” (JP-807 Abstract, Purpose.) Applicants respectfully submit that inputting a shutter as proffered would increase the cost and weight of JP-807, thus discouraging the skilled artisan from doing so.

\* \* \* \* \*

Applicants further respectfully submit that the skilled artisan would not have looked to the device of US-909, since an endoscope is far removed from the field of stereomicroscopes.

#### Lack of a Reasonable Expectation of Success

MPEP § 2143.02 permits references to be modified or combined to reject a claim as obvious only if there is a reasonable expectation of success. There is no evidence in the references, and certainly none identified in the Office Action, that one of ordinary skill in the art would have a reasonable expectation of success in achieving Applicants’ invention by combining the references. For example, Applicants respectfully submit that placing a shutter

in the beam paths of JP-807 would interfere with the operation of the combiner element 1. This is because JP-807 teaches that the combiner element 1 controls the overlaid image from the display, and placing a shutter in the beam paths from the display would thus present an additional varying element in the system of JP-807. That is, combiner element 1 would be varying the overlaid image and the added shutter would also be varying the image. Thus, the artisan of ordinary skill would not reasonably expect that JP-807 could be combined with a shutter as proffered in the Office Action and successfully operate. (Applicants note that this example is simply a starting point for a showing of a reasonable expectation of success; more would be needed.) Thus, one of ordinary skill in the art would not see the combination of the references as producing a successful stereomicroscope. Because of this, the second criteria of MPEP § 2143 has not been met in the Office Action, and a *prima facie* case of obviousness has therefore not been established.

#### **Request for Rejoinder of Withdrawn Claims**

Claims 13, 14, 16 and 17 were withdrawn in a prior Office Action. Applicants note that these claims ultimately depend from claim 11. Applicants respectfully request that the PTO rejoin and reconsider these claims due to their dependency from claim 11, a claim that is allowable.

#### **New Claims**

As seen above, Applicants have added new claims 38-43 which tie microscope elements to the various beam paths. Applicants respectfully submit that these claims are allowable for at least the pertinent reasons detailed above.



**Conclusion**

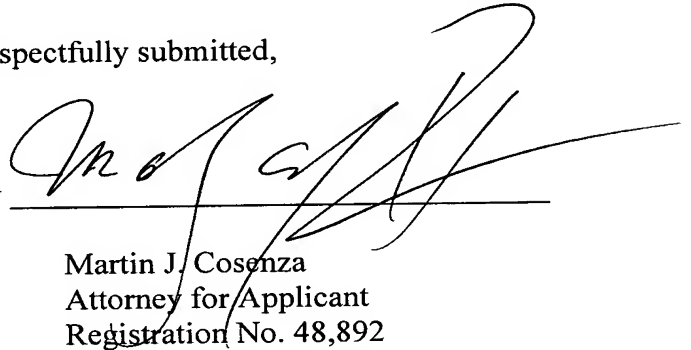
Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Fineman is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

By



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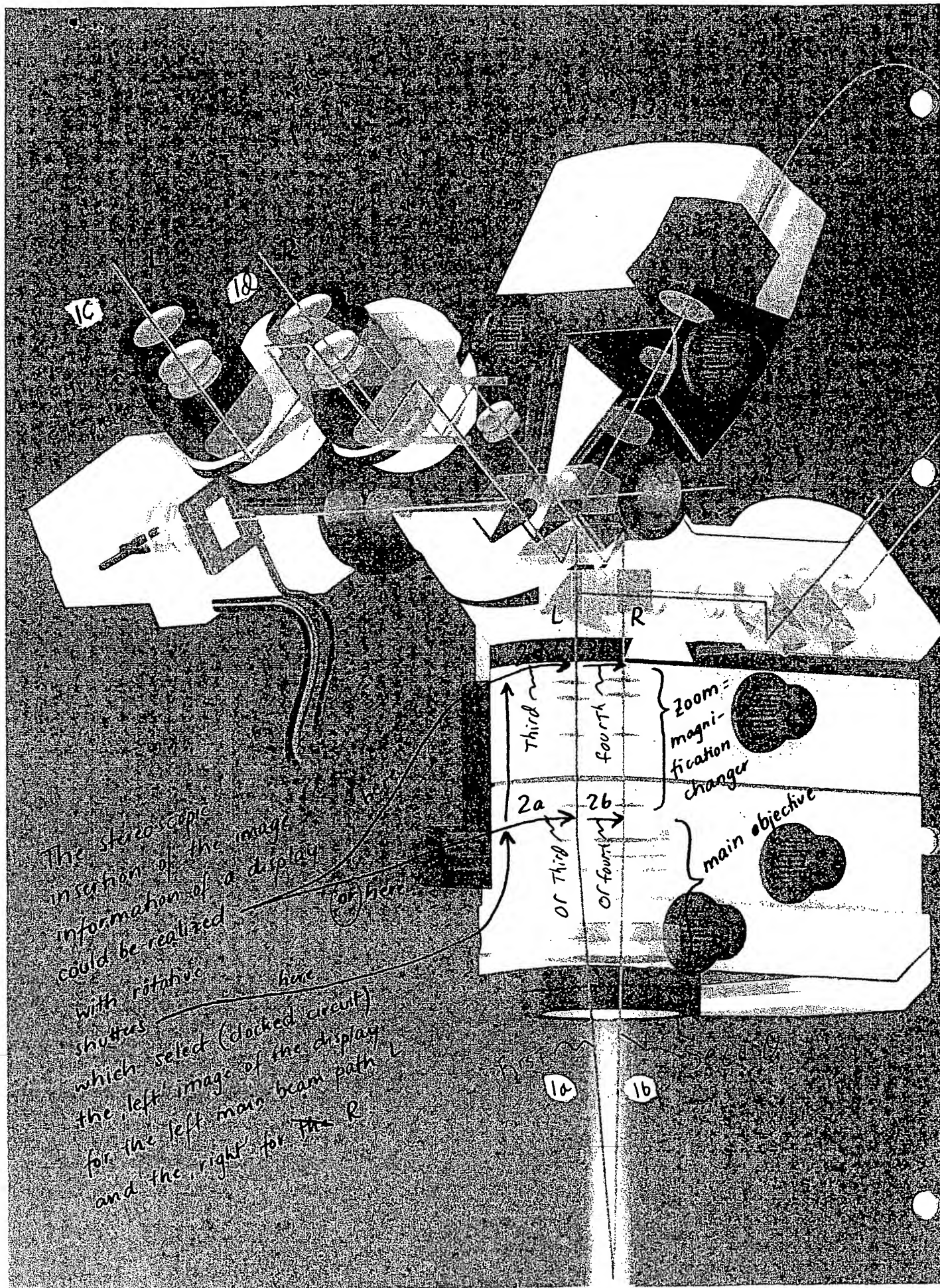
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## APPENDIX A



Atty. Dkt. No. 027478-0113

## APPENDIX B



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